NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924) **U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE**	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH **November** YEAR **2009**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **Alan E. Gerard, Meteorologist In-Charge** DATE **12/14/2009**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

☐ **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

Synopsis...

After several months of above normal rainfall over much of the Hydrologic Service Area (HSA), November rainfall was below to well below normal. The dry weather was welcomed by all, especially to those who are vulnerable to flooding in the HSA. It came too late for agricultural interests who lost much of their crops due to wet conditions. Much of the HSA was declared an agricultural disaster area due to the wet conditions over the past several months combined with the drought conditions in June.

After a wet end to the month October, high pressure built into the region and remained in control through the 8th.

An upper level disturbance approached from the west as Tropical Storm Ida made landfall near Mobile on the 10th. A cold front moved through the HSA during the day. Rainfall from 1.00 to 3.00 inches fell over east and southeast portions of Mississippi on the 10th. Some storm rainfall totals: 3.50 inches at Shubuta, MS; 3.32 inches at Crandall, MS; 2.55 inches at Pat Harrison Waterway's Archusa Waterpark; and 1.99 inches at Topton, MS. High pressure moved into the region from the 11th to the 15th.

A cold front moved through on the 16th. Surface high pressure built into the HSA on the 17th; however, wrap around moisture from an upper level low over Missouri left light drizzle and clouds over northern portions of the HSA through the 18th. Rainfall associated with frontal passage was generally an inch or less. Skies cleared from the 19th into the 20th. By the morning of 21st, a low pressure center had developed off of the Texas Coast. The low moved across the coastal areas of Louisiana and Mississippi by the morning of the 22nd. Rainfall over south portions of the HSA ranged from 0.50 to 1.50 inches while central and northern sections received a 0.50 or less. Weak high pressure began building into the HSA by the afternoon of the 22nd.

A cold front moved through the HSA on the evening of the 23rd. Little, if any, rainfall occurred over extreme northern portions of the HSA. Another dry cold front pushed through the area on the 25th and early on the 26th bringing a little colder air into the area for Thanksgiving Day. High pressure moved into the region from the 26th through early on the 29th. A

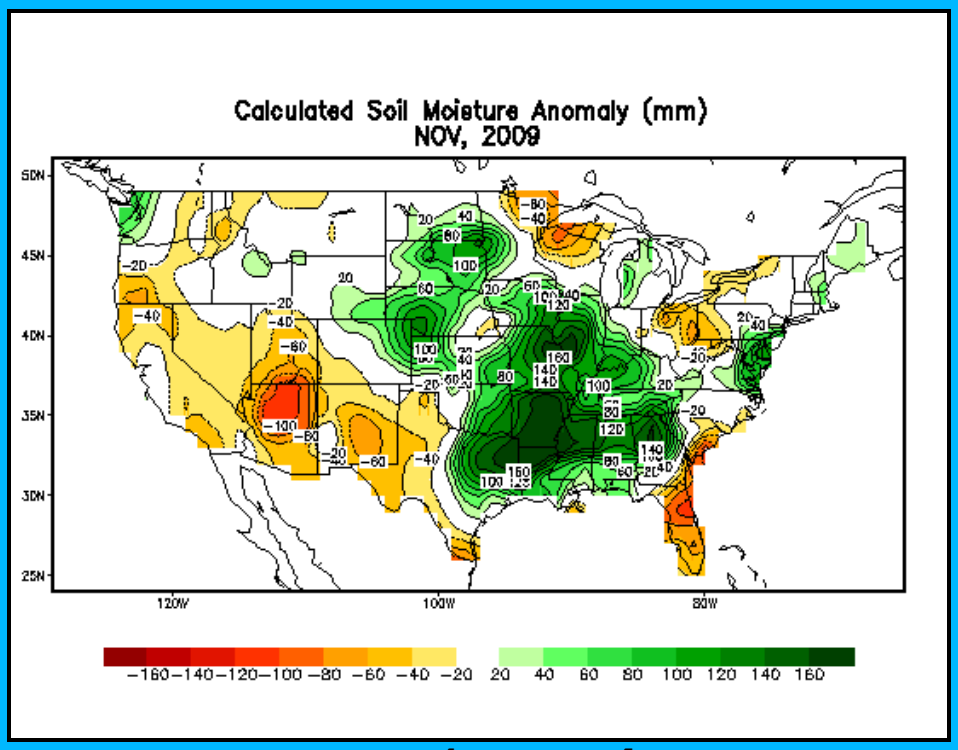
fast moving cold front raced across the area from late on the 29th into the morning of the 30th, bringing 0.50 to 2.50 inches to the northwest and north HSA and 0.25 to 1.00 inch to south and east portions of the HSA. High pressure built into the region behind the front.

River and Soil Conditions...

The lowest rainfall totals were along the Natchez Trace in Mississippi where rainfall was 20 to 30 percent of normal. Most of the HSA had 30 to 50 percent of normal rainfall. Rainfall was 50 to 110 percent of normal over southern Forrest, southeastern Jones, and Clarke County.

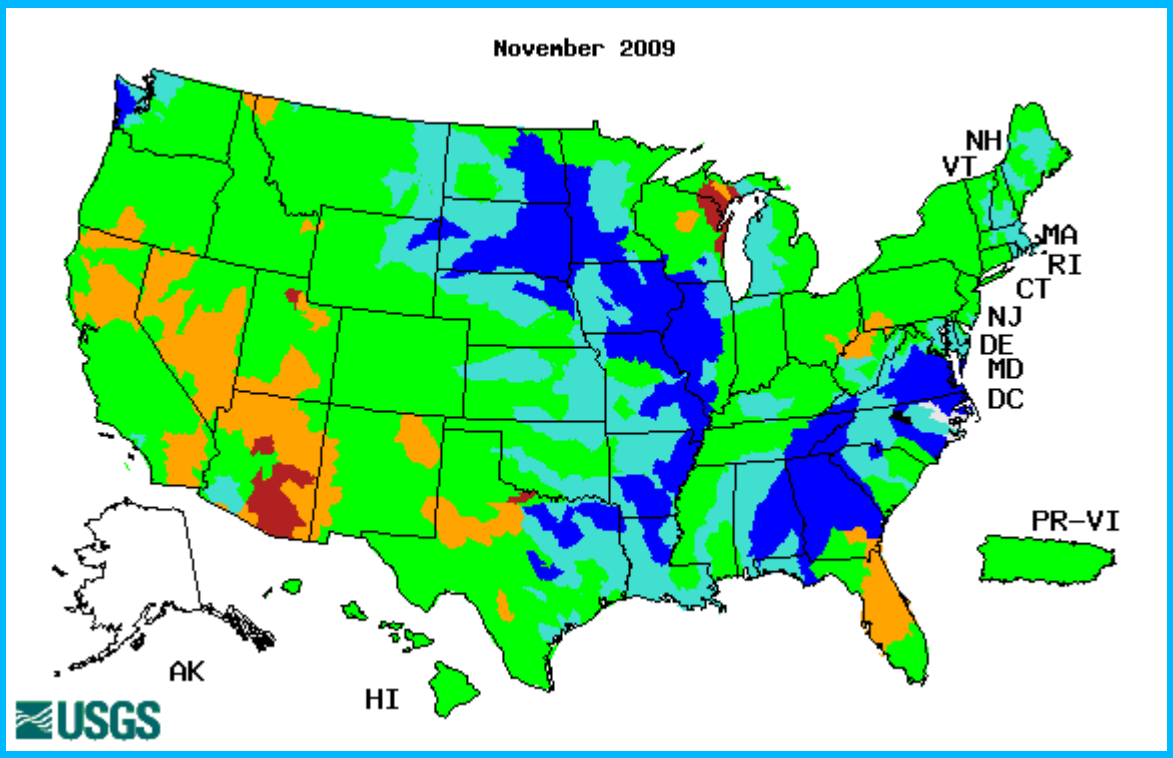
Soil moisture across the HSA is running from 3.00 inches above normal in Southeast Mississippi to in excess of 6.00 inches above normal over Southeast Arkansas and Northeast Louisiana. Below normal rainfall for November had only minor impact on soil moisture across the area.

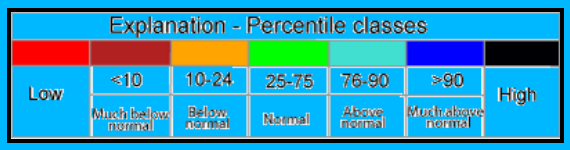
Soil Moisture anomaly (departure from normal): (25.4mm = 1 inch)



November Anomaly

The United States Geological Survey's (USGS) November 2009 river streamflow records were compared with all historical November streamflow records. Streamflow was near normal in Southeast Mississippi. Elsewhere, streamflow was normal to above normal.





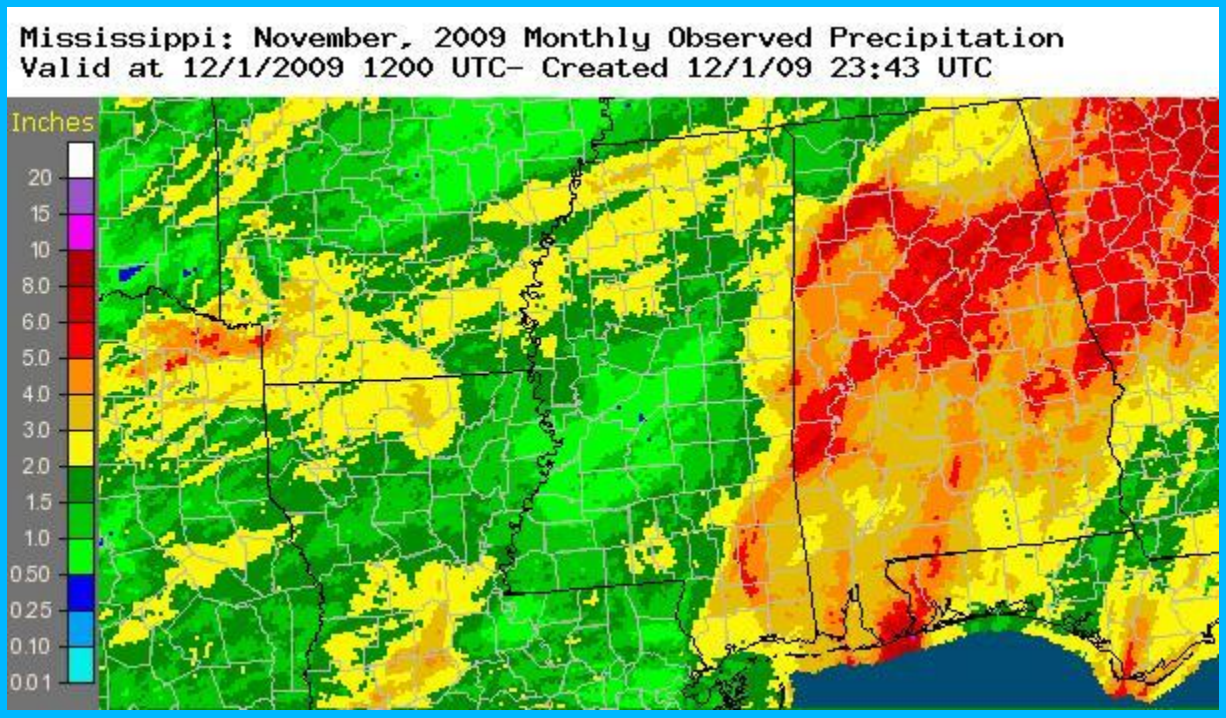
Moderate flooding continued along the Lower Boeuf River in Louisiana due to backwater from the Ouachita River. The Mississippi River had unseasonably high stages during the month of November exceeding minor flood stage at Natchez, MS. Minor flooding was also observed along the Big Black River, Upper Sunflower River, and the Yalobusha River. With the exception of some minor rises during the first week of the month, most rivers were falling throughout the month.

Based on current soil moisture conditions, current streamflow conditions, and a below normal to near normal rainfall over central and northern portions of the HSA to an above normal rainfall forecast over southern portions of the HSA during the next 60 to 90 days:

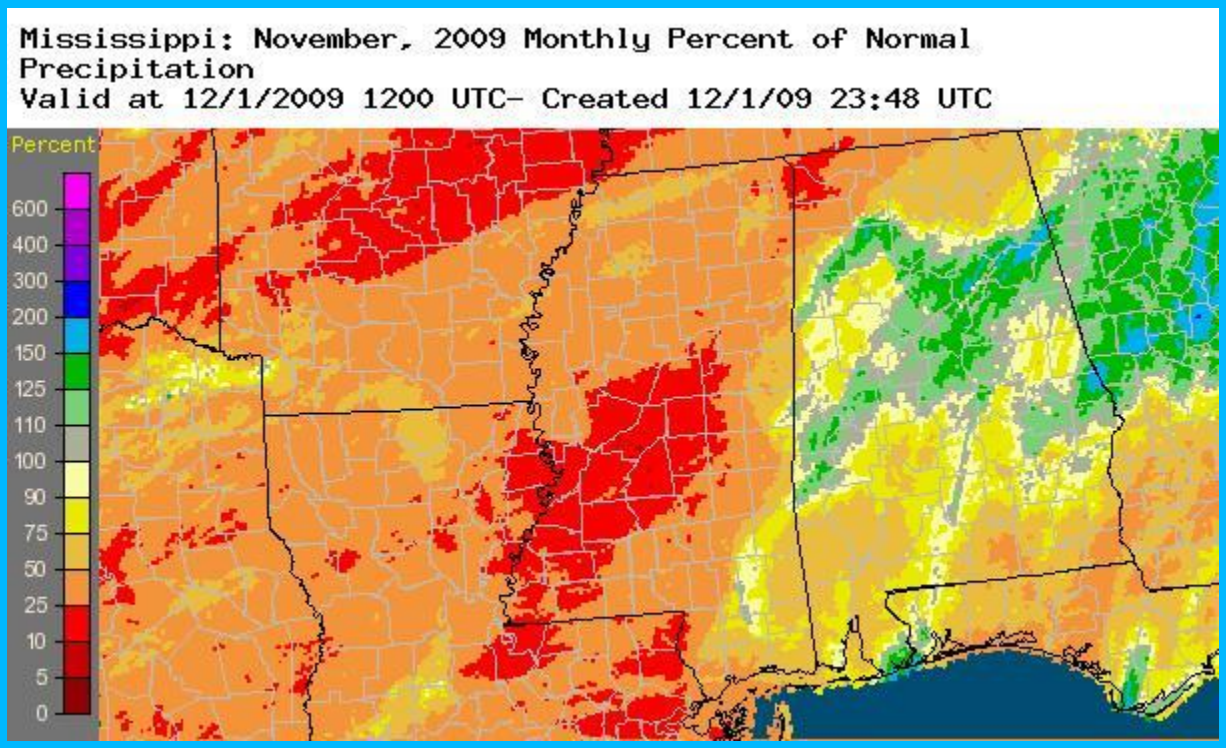
Pearl River System:	Above normal flood potential.
Yazoo River System:	Above normal flood potential.
Big Black River System:	Above normal flood potential.
Homochitto River System:	Above normal flood potential.
Pascagoula River System:	Above normal flood potential.
Northeast LA and Southeast AR:	Above normal flood potential.
Tombigbee River System:	Above normal flood potential.

Rainfall for the month of November

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on October 31st until 7 am on November 30th were: 3.70 inches at Shubuta, MS; 3.60 inches at Crandall, MS; 2.78 inches at Pat Harrison Waterway's Archusa Waterpark; 3.08 inches at Gholson, MS; 2.60 inches at Eudora, AR; 2.55 inches at Belzoni, MS; 2.48 inches at Brooksville, MS; 2.46 inches at Bluff Lake, MS; 2.40 inches at Collinsville, MS; 2.37 inches at Dekalb, MS; and 2.29 inches at Bastrop, LA.



November 2009 Rainfall Estimates



November 2009 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

November rainfall for Selected Cities...

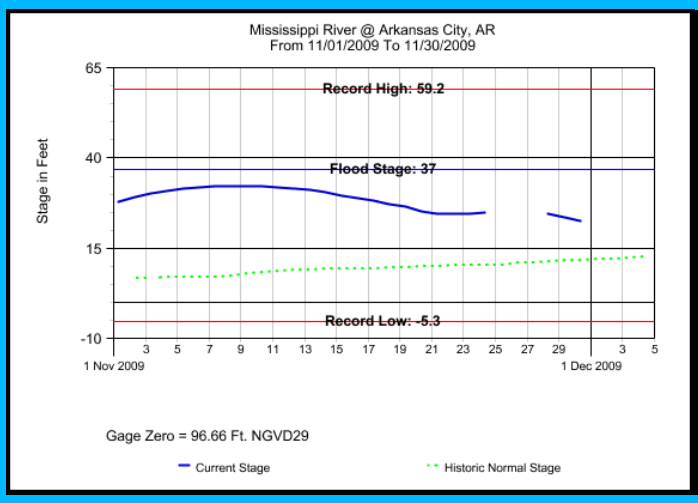
City (Airport)	November Rainfall	Departure from normal	2009 Rainfall	2009 Departure from Normal
Jackson, MS	0.89	-4.15	50.21	-0.40
Meridian, MS	2.53	-2.42	49.97	-3.37
Greenwood, MS	2.25	-2.60	64.12	+15.08
Greenville, MS	1.88	-3.72	57.55	+8.60
Hattiesburg, MS	2.34	-2.95	50.55	-6.67
Vicksburg, MS	0.80	-4.42	53.30	+0.73

Note: Some corrections to Meridian, Greenville, Vicksburg 2009 rain totals or 2009 departures

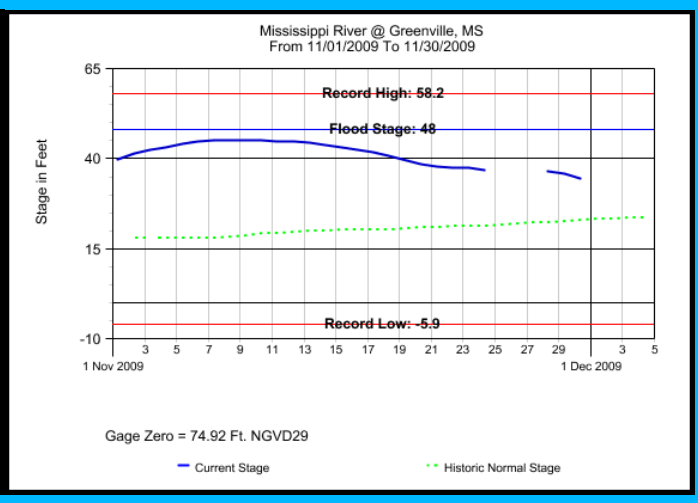
Mississippi River...

Mississippi River Plots for November, 2009

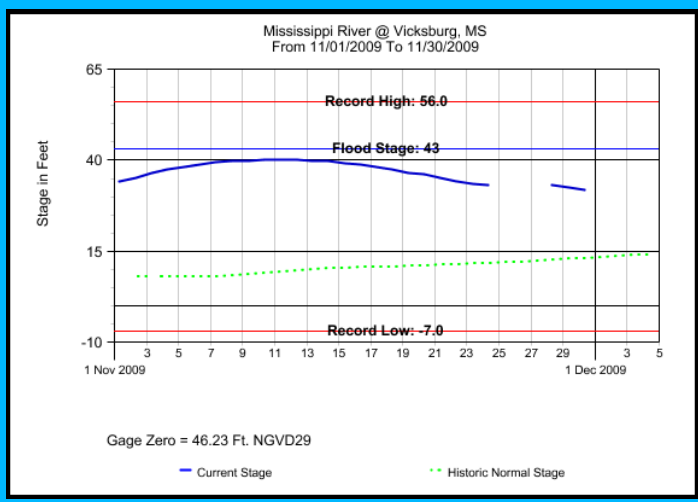
Plots Courtesy of the United States Army Corps of Engineers



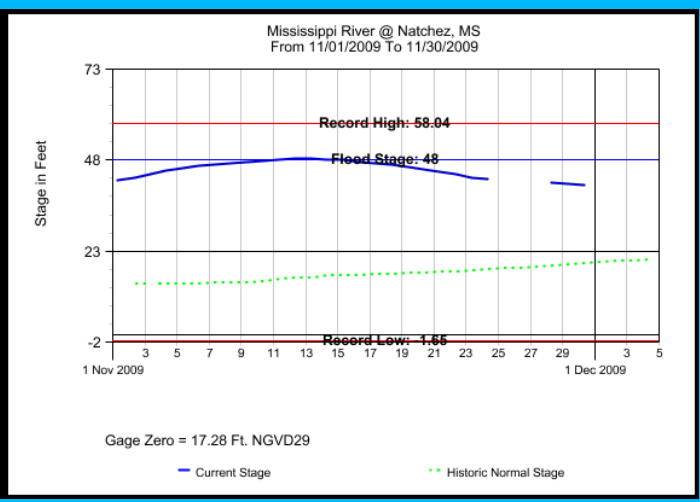
Arkansas City, AR



Greenville, MS



Vicksburg, MS



Natchez, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	32.32	11/08/09	21.96	11/30/09
Greenville, MS	48	45.29	11/10/09	33.90	11/30/09
Vicksburg, MS	43	40.27	11/11/09	31.22	11/30/09
Natchez, MS	48	48.39	11/13/09	40.77	11/30/09

Total Flood Warning products issued: 05
Total Flood Statement products issued: 124
Daily Rainfall Products (RRA'S) issued: 30
Daily River Forecast Products (RVS'S) issued: 30
Daily River Stage products (RVA'S) issued: 30

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&

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District